

CLAIMS:

1. A method of forming a film comprising:
providing a first light transmitting substrate having opposite first and second major surfaces, the first surface having a plurality of structures defining a plurality of cavities therebetween;
providing a second substrate having opposite first and second major surfaces and an optical material disposed on the first surface of the second substrate; and
positioning the first surface of the first substrate proximate the first surface of the second substrate to at least partially fill the cavities with the optical material.
2. The method of claim 1 in which the optical material is a light absorbing adhesive.
3. The method of claim 1 in which:
the plurality of structures comprise a host material that has a first refractive index; and
the optical material has a second refractive index, the second refractive index being less than the first refractive index.
4. The method of claim 3 in which:
the first light transmitting substrate has a third refractive index, the third refractive index being greater than the second refractive index.
5. The method of claim 3 in which a difference between the first refractive index and the second refractive index is at least about 0.06.

6. The method of claim 1 in which the second substrate is a shield.
7. The method of claim 1 in which the step of positioning the first surface of the first substrate toward the first surface of the second substrate to at least partially fill the cavities with the optical material includes completely filling the cavities with the optical material.
8. The method of claim 1 in which each structure is light diffusive.
9. The method of claim 1 in which the optical material is light absorbing.
10. The method of claim 1 in which:
the first light transmitting substrate is flexible;
the second substrate is flexible; and
the film is rigid.
11. A film for a screen comprising:
a light transmitting substrate;
a plurality of structures disposed on the substrate, the structures defining a plurality of cavities therebetween;
a shielding substrate disposed proximate the plurality of structures; and
an optical adhesive disposed between the shielding substrate and the plurality of structures, the optical adhesive at least partially filling the cavities.
12. The film of claim 11 further comprising air partially filling the cavities.

13. The film of claim 11 in which the plurality of structures have a first refractive index and the optical adhesive has a second refractive index, the second refractive index being less than the first refractive index.

14. The film of claim 13 in which a difference between the first refractive index and the second refractive index is at least about 0.06.

15. The film of claim 11 in which the optical adhesive completely fills the cavities.

16. The film of claim 11 in which each structure has a base and a plurality of walls which narrow the structure as the walls extend from the base.

17. The film of claim 16 in which each structure is a rib.

18. The film of claim 11 in which the light transmitting substrate comprises a first material and the plurality of structures comprise the first material and a plurality of light diffusing particles.

19. The film of claim 11 in which the optical adhesive includes a black pigment.

20. The film of claim 11 in which the film is rigid.

21. The film of claim 11 in which each structure is light diffusive.

22. The film of claim 11 in which the optical adhesive is light absorbing.

23. The film of claim 11 in which:
the first light transmitting substrate is flexible;
the shielding substrate is flexible; and
the film is rigid.
24. A method of forming a film comprising:
providing a light transmitting substrate having a plurality of structures
disposed thereon, the structures defining a plurality of cavities
therebetween;
disposing a shielding substrate proximate the plurality of structures; and
at least partially filling the cavities with an optical adhesive disposed
between the shielding substrate and the plurality of structures.
25. The method of claim 24 in which the plurality of structures have a first refractive index and the optical adhesive has a second refractive index, the second refractive index being less than the first refractive index.
26. The method of claim 25 in which a difference between the first refractive index and the second refractive index is at least about 0.06.
27. The method of claim 24 in which the step of filling the cavities includes completely filling the cavities with the optical adhesive.